



*District Mission:
Dedicated to Satisfying
our Community's
Water Needs*

December 17, 2007

Department of Water Resources
ATTN: David Todd
P.O. Box 94236
Sacramento, CA. 94236

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RE: 2005 UWMP Addendum

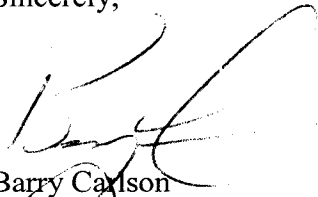
Mr. Todd,

Enclosed is an addendum to Mesa Consolidated Water District's 2005 Urban Water Management Plan, an electronic copy of Orange County Water District's Groundwater Management Plan, and a Conservation Ordinance approved by Mesa Consolidated Water District's Board of Directors.

Over the last few weeks I have been working with Sergio Fierro in creating these additions. After reviewing these items Sergio expressed approval of these additions to Mesa Consolidated Water District's 2005 Urban Water Management Plan.

Please review the enclosed items and contact me if you have any questions.

Sincerely,



Barry Carlson
Resource Efficiency Specialist

(949) 631-1205
BarryC@mesawater.org

Enclosures: Mesa Consolidated Water District 2005 UWMP Addendum
Orange County Water District Groundwater Management Plan (CD)
Mesa Consolidated Water District Ordinance No. 19

ADDENDUM
MESA CONSOLIDATED WATER DISTRICT
2005 URBAN WATER MANAGEMENT PLAN
NOVEMBER 28, 2007

Prior to final submittal, the 2005 Urban Water Management Plan is reviewed by the Department of Water Resources. During the review process the Department of Water Resources has determined a need for additional information. The following additions address the areas where additional information was requested by the Department of Water Resources.

ADDITIONS TO THE 2005 URBAN WATER MANAGEMENT PLAN

A. SECTION 3.2 – WATER SOURCES – GROUNDWATER

- 1) A copy of Orange County Water District 2004 Groundwater Management Plan is attached.
- 2) The Orange County Groundwater Basin (Basin) underlies the north half of Orange County beneath broad lowlands known as the Tustin and Downey plains. The Basin covers an area of approximately 350 square miles, bordered by the Coyote and Chino hills to the north, the Santa Ana Mountains to the northeast, the Pacific Ocean to the southwest, and terminates at the Orange County line to the northwest, where its aquifer systems continue into the Central Basin of Los Angeles County. Groundwater flow is unrestricted across the county line. The Newport-Inglewood fault zone forms the southwestern boundary of all but the shallow aquifers in the Basin. The aquifers comprising the Basin extend over 2,000 feet deep and form a complex series of interconnected sand and gravel deposits (DWR, 1967). In coastal and central portions of the Basin, these deposits are more separated by extensive lower-permeability clay and silt deposits, known as aquitards. In the inland area, generally northeast of Interstate 5, the clay and silt deposits become thinner and more discontinuous, allowing larger quantities of groundwater to flow more easily between shallow and deeper aquifers.

OCWD's extensive groundwater monitoring well network provides data on the Basin's aquifers to depths of 2,000 feet in many areas of the Basin. The monitoring wells provide detailed, depth-specific water level and water quality data from individual aquifer zones. Data from these wells were used to delineate the depth of the "principal" aquifer system, within which most of the groundwater production occurs. Shallower aquifers exist above the principal aquifer system, the most prolific being known as the Talbert aquifer. With the exception of a few large-system municipal wells in the cities of Garden Grove, Anaheim, and Tustin, wells producing from the shallow aquifer system predominantly have small-system industrial and agricultural uses. Production from the shallow aquifer system is typically about five percent of total Basin production. Deeper aquifers exist below the principal aquifer system, but these zones have been found to contain colored water or have been too deep to

economically construct production wells. With the exception of four colored water production wells constructed by MCWD and IRWD, few wells penetrate the deep aquifer system.

Groundwater production from the Basin totaled approximately 350,000 af in 2001-02 and has steadily increased since 1954. Production occurs from approximately 500 active wells within the District, approximately 300 of which produce less than 25 afy. Groundwater production from approximately 200 large-capacity or large-system wells operated by the 21 largest water retail agencies accounted for an estimated 97 percent of the total production in 2001-02. Large-capacity wells are all metered, and monthly individual well production has been documented since 1988. Prior to 1988, per-well production data were recorded semi-annually.

B. SECTION 3.5 FACTORS RESULTING IN INCONSISTENCY OF SUPPLY (TABLE 3-6)

- 1) Supply reliability in table 3-4 shows Mesa's expected supply is greater than 100% under single-dry and multiple-dry years. If needed, Mesa could purchase additional supplies from MWDOC. Hence, Mesa has no unreliable sources.
- 2) Mesa has taken an integrated approach for water supply. This approach includes multiple sources, i.e. groundwater, colored water, recycled, and import. These water sources are consistent.

C. SECTION 7.2 WATER SUPPLY SHORTAGE STAGES AND CONDITIONS

- 1) Table 23 identifies each specific stage level with related supply conditions.

Table 23 Water Supply Shortage Stages and Conditions		
RATIONING STAGES		
Stage No.	Water Supply Conditions	% Shortage
1	Voluntary	Up to 10%
2	Water Watch	20%
3	Water Alert	30%
4	Water Warning	40%
5	Water Emergency	50%

D. SECTION 7.7 CONSUMPTION REDUCTION METHODS

- 1) Table 27 lists the consumption reduction methods Mesa will use to reduce water use in the most restrictive stages with up to a 50% reduction.

Table 27 Consumption Reduction Methods		
Consumption Reduction Methods	Stage When Method Takes Effect	Projected Reduction (%)
Leak repair, irrigation on non-windy days, restaurants to provide water when requested, car washing restrictions, and runoff control.	1	up to 15%
Stage 1 plus, conservation pricing resulting in surcharges on usage above calculated budgets.	2	20%
Stage 1, 2, plus designated irrigation days, and pond/fountain restrictions	3	30%
Stage 1, 2, 3, plus modified irrigation times/days, swimming pool restrictions, modified car washing restrictions	4	40%
Stage 1, 2, 3, 4, plus irrigation and construction usage prohibited.	5	50%

E. SECTION 8.2.1 WASTEWATER COLLECTED AND TREATMENT

- 1) The Costa Mesa Sanitary District was formed in 1944 under the Sanitary District Act of 1923. The District boundaries encompass all of the City of Costa Mesa and portions of Newport Beach and unincorporated Orange County. The District, an industry leader, provides wastewater collection services to 25,000 parcels via 325-miles of sewer line. The liquid waste collection is transmitted to Orange County Sanitation District facilities for treatment and disposal. Table 33 quantifies the volume of wastewater collected and treated by Costa Mesa Sanitary District.

Table 33 Wastewater Collection and Treatment - AF Year							
	2000	2005	2010	2015	2020	2025	2030 - opt
Wastewater collected in service area	39	41	43	44	46	47	47
Volume that meets recycled water standard	0	0	0	0	0	0	0

- 2) Disposal of wastewater is performed by Orange County Sanitation District. In 2015 all wastewater will receive primary and full secondary treatment. Table 34 describes the methods of wastewater disposal.

Table 34 Disposal of wastewater (non-recycled) AF Year							
Method of disposal	Treatment Level	2005	2010	2015	2020	2025	2030 - opt
Ocean Outfall	Primary and partial secondary	41	43				
Ocean Outfall	Primary and full secondary			44	46	47	47
Total		41	43	44	46	47	47

ORDINANCE NO. 19

ORDINANCE OF THE MESA CONSOLIDATED WATER DISTRICT BOARD OF DIRECTORS ADOPTING AN AMENDMENT AND SUPPLEMENT TO ORDINANCE NO. 8 CONCERNING EMERGENCY WATER CONSERVATION PROGRAM

WHEREAS, the Mesa Consolidated Water District (Mesa) is a county water district organized pursuant to Water Code Sections 33200 and following, and operating pursuant to Water Code Sections 30000 and following; and

WHEREAS, pursuant to the applicable provisions of California law, Mesa is required to periodically prepare and update an Urban Water Management Plan in order to address certain water supply and planning requirements; and

WHEREAS, the Board of Directors (Board) of Mesa has previously adopted Ordinance No. 8 entitled, Adopting an Emergency Water Conservation Program, which was adopted on March 21, 1991 (Ordinance No. 8); and

WHEREAS, Water Code Section 10632 requires the Urban Water Management Plan to provide an urban water shortage contingency analysis, which includes stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage; and

WHEREAS, Mesa's Board hereby determines that it is appropriate to amend and supplement Ordinance No. 8 as set forth herein.

NOW, THEREFORE, BE IT ORDAINED BY THE MESA CONSOLIDATED WATER DISTRICT BOARD OF DIRECTORS TO AMEND AND SUPPLEMENT ORDINANCE NO. 8 AS FOLLOWS:

Section 1: This Ordinance will act as an amendment and supplement to Ordinance No. 8. Capitalized terms not otherwise defined herein shall have the respective meaning(s) as set forth in Ordinance No. 8. Except as expressly set forth herein, Ordinance No. 8 is not otherwise amended.

Section 2: The following defined terms and percentages set forth in Ordinance No. 8 are hereby amended as follows:

- (a) Phase I: Water Watch – Up to 10 percent Water Shortage Voluntary Compliance.
- (b) Phase II: Water Watch – 20 percent Water Shortage with Conservation Rates.
- (c) Phase III: Water Alert – 30 percent Water Shortage Mandatory Compliance.
- (d) Phase IV: Water Warning – 40 percent Water Shortage Mandatory Compliance.

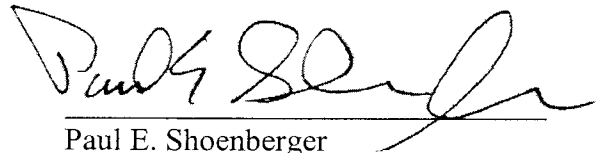
(e) Phase V: Water Emergency – 50 percent Water Shortage Mandatory Compliance.

Section 3: Mesa staff and consultants are hereby authorized and directed to take such other and further action(s) as may be necessary to conform Mesa's planning and procedures to the amendment and supplement to Ordinance No. 8 set forth herein.

Section 4: This Ordinance No. 19 shall take effect upon adoption.

ADOPTED, SIGNED, AND APPROVED this 10th day of December 2007 by the following roll call vote:

AYES: DIRECTORS: Ohlig-Hall, Bockmiller, Dewane, Atkinson
NOES: DIRECTORS:
ABSENT: DIRECTORS: Shoenberger
ABSTAIN: DIRECTORS:



Paul E. Shoenberger
President, Board of Directors

ATTEST:



Coleen L. Monteleone
District Secretary